










# Short term catheterisation after vaginal prolapse surgery increased recatheterisations, but reduced urinary tract infections, duration of catheterisation, and hospital stay

Hakvoort RA, Elberink R, Vollebregt A, *et al*. How long should urinary bladder catheterisation be continued after vaginal prolapse surgery? A randomised controlled trial comparing short term versus long term catheterisation after vaginal prolapse surgery. *BJOG* 2004;111:828–30.

## Q Is short term catheterisation more beneficial than standard, prolonged catheterisation after vaginal prolapse surgery?

### METHODS

	<b>Design:</b> randomised controlled trial.
	<b>Allocation:</b> unclear allocation concealment.
	<b>Blinding:</b> unblinded.
	<b>Follow up period:</b> to the end of hospital stay.
	<b>Setting:</b> a large hospital in the Netherlands.
	<b>Patients:</b> 100 women who were having anterior colporrhaphy. Patients with signs of a preoperative urinary tract infection (UTI) were excluded.
	<b>Intervention:</b> all patients had a transurethral Foley catheter (Charrière 14) inserted in the operating suite immediately after surgery. 50 patients were allocated to short term catheterisation (catheter removal on the morning after surgery), and 50 patients were allocated to standard prolonged catheterisation (catheter removal on the morning of the 5 <sup>th</sup> postoperative day). Patients with imminent overfilling (ie, a post-voiding residual volume $\geq$ 200 ml) were recatheterised for another 3 days.
	<b>Outcomes:</b> UTI ( $>10^5$ colony forming units/ml), recatheterisation, duration of catheterisation, and duration of hospital stay.
	<b>Patient follow up:</b> 94% included in analysis (mean age 67 y).

### MAIN RESULTS

More patients in the short term group than in the prolonged group were recatheterised (table); nevertheless, mean duration of catheterisation was shorter in the short term group (2.3 v 5.3 d,  $p<0.001$ ) as was the mean duration of hospital stay (5.7 v 7.0 d,  $p<0.001$ ). Fewer patients in the short term group had UTIs (table).

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### CONCLUSIONS

Catheter removal on the morning after vaginal prolapse surgery was associated with a higher number of residual volumes requiring recatheterisation than catheter removal on the 5<sup>th</sup> postoperative day; nevertheless, duration of catheterisation and duration of hospital stay were shorter with short term catheterisation. Patients who had short term catheterisation also had fewer urinary tract infections.

### Commentary

The use of urinary catheters after genitourinary surgery is accepted practice to enable drainage and prevent overdistension of the bladder. This is necessary in surgery such as vaginal prolapse surgery because of the increased risk of urinary retention. Anterior colporrhaphy is performed primarily for urinary incontinence, and therefore these patients may already have some degree of detrusor instability or dysfunction.<sup>1</sup>

The findings of the study by Hakvoort *et al* indicate that women who had catheter removal on the day after anterior colporrhaphy had considerably lower rates of UTIs than women who had catheter removal on the 5<sup>th</sup> postoperative day, but they had higher rates of recatheterisation because of urinary retention.

The question of how long catheters should remain in situ after surgery has been debated for several years and has not yet been resolved. The study by Hakvoort *et al* unfortunately does not provide a definitive answer to the question with respect to anterior colporrhaphy. The recatheterisation rates associated with early catheter removal are high enough to introduce uncertainty about the benefits of early removal, but UTI rates associated with prolonged catheterisation are also high enough to conclude that catheterisation for 5 days after surgery is too long. The risk of catheter related UTIs increases with the length of time a catheter is in situ, with bacteria generally present after 72 hours and an increase of catheter related UTIs of approximately 8% per day.<sup>2</sup> The best prevention for catheter related UTIs is catheter removal as soon as possible.

Recatheterisation with an indwelling catheter is also debatable. The use of intermittent catheterisation may be more appropriate because of the reduced risk of UTI and establishment of a more natural filling and emptying cycle. Future studies should consider the effects of different durations of catheterisation and perhaps different forms of catheterisation, such as intermittent or suprapubic catheterisation.

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1 Glazener CM, Cooper K. *Cochrane Database Syst Rev* 2001;(1):CD001755.

2 Laurent C. *Nurs Times* 1998;94:60–2, 64.

### Short term v prolonged catheterisation after vaginal prolapse surgery\*

Outcomes	Short term catheterisation	Prolonged catheterisation	RR (95% CI)	NNH (CI)
Recatheterisation	40%	8.7%	355% (80 to 1114)	4 (3 to 7)
			RRR (CI)	NNT (CI)
Urinary tract infection	4.2%	39%	89% (62 to 97)	3 (2 to 5)

\*Abbreviations defined in glossary; RRI, RRR, NNH, NNT, and CI calculated from data in article.



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